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Substitute for form 1449A/PTO				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Application Number	10/578,248
				Filing Date	May 4, 2006
				First Named Inventor	Suk-Wah TAM-CHANG <i>et al.</i>
				Art Unit	1634
				Examiner Name	Unassigned
Sheet	1	of	3	Attorney Docket Number	031673-002000

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		U.S. - 5,744,305	04-28-1998	FODOR, <i>et al.</i>	
		U.S. - 5,723,591	03-03-1998	LIVAK, <i>et al.</i>	
		U.S. - 6,117,986	09-12-2000	NARDONE, <i>et al.</i>	
		U.S. - 6,258,569	07-10-2001	LIVAK, <i>et al.</i>	
		U.S. - 6,451,530	09-17-2002	HAWKINS, <i>et al.</i>	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		BEIER, M. and HOHEISEL, J. D., Versatile derivatization of solid support media for covalent bonding on DNA-microchips, <i>Nucl. Acids Res.</i> , 27(9):1970-1977, 1999	
		NIEMEYER, C and BLOHM, D., DNA Microarrays, <i>Angew Chem. Int. Ed. Engl.</i> 38(19):2865-2869, 1999	
		ROGERS, Y.H. <i>et al.</i> , Immobilization of oligonucleotides onto a glass support via disulfide bonds: A method for preparation of DNA microarrays, <i>Anal. Biochem.</i> , 266(1):23-30, 1999	
		ZAMMATTEO, N. <i>et al.</i> , Comparison between different strategies of covalent attachment of DNA to glass surfaces to build DNA microarrays, <i>Anal. Biochem.</i> , 280(1):143-150, 2000	
		PIRRUNG, M. C. <i>et al.</i> , How to make a DNA chip, <i>Angew Chem. Int. Ed. Engl.</i> , 41(8):1276-1289, 2002	
		CHARLES, P. T. <i>et al.</i> , Fabrication and surface characterization of DNA microarrays using amine- and thiol-terminated oligonucleotide probes, <i>Langmuir</i> , 19(5):1586-1591, 2003	
		SCHENA, M. <i>et al.</i> , Quantitative monitoring of gene expression patterns with a complementary DNA microarray, <i>Science</i> , 270(5235):467-470, 1995	
		SEIDEL, C. A. M. <i>et al.</i> , Nucleobase-specific quenching of fluorescent dyes. 1. nucleobase one-electron redox potentials and their correlation with static and dynamic quenching efficiencies, <i>J. Phys. Chem.</i> , 100(13):5541-5553, 1996	
		LEWIS, F. D. and WU, Y., Dynamics of superexchange photoinduced electron transfer in duplex DNA, <i>J. Photochem. Photobiol. C: Photochem. Rev.</i> , 2(1):1-16, 2001	

Examiner Signature	/Bradley Sisson/	Date Considered	07/06/2009
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Sheet	2	of	3	Attorney Docket Number	031673-002000

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		LEWIS, F. D. <i>et al.</i> , Dynamics of photoinduced charge transfer and hole transport in synthetic DNA hairpins, <i>Acc. Chem. Res.</i> , 34(2):159-170, 2001	
		DE SILVA, A. P. <i>et al.</i> , The development of molecular fluorescent switches, <i>Trends Biotechnol.</i> , 19(1):29-34, 2001	
		TORIMURA, <i>et al.</i> , Fluorescence-quenching phenomenon by photoinduced electron transfer between a fluorescent dye and a nucleotide base, <i>Anal. Sci.</i> , 17(1):155-160, 2001	
		THOMAS, G. K. <i>et al.</i> , Photochemistry of chromophore-functionalized gold nanoparticles, <i>Pure Appl. Chem.</i> 74(9):1731-1738, 2002	
		VULLEV, V. I. <i>et al.</i> , Photoinduced charge transfer in helical polypeptides, <i>Res. Chem. Intermed.</i> , 28(7-9):795-815(21), 2002	
		YAMANE, A., MagiProbe: a novel fluorescence quenching-based oligonucleotide probe carrying a fluorophore and an intercalator, <i>Nucl. Acids Res.</i> , 30(19):e97, 2002	
		DU, H. <i>et al.</i> , Hybridization-Based Unquenching of DNA Hairpins on Au Surfaces: Prototypical "Molecular Beacon" Biosensors, <i>J. Am. Chem. Soc.</i> , 125(14):4012-4013, 2003	
		KAWAI, K. and MAJIMA, T., Effect of hydrogen bonding on the photo-oxidation of DNA, <i>J. Photochem. Photobiol. C: Photochem. Rev.</i> , 3(1):53-66, 2002	
		MAY, J. P. <i>et al.</i> , A new dark quencher for use in genetic analysis, <i>Chem. Commun. (Camb.)</i> : (8):970-971, 2003	
		MORRISON, L. E. <i>et al.</i> , Solution-phase detection of polynucleotides using interacting fluorescent labels and competitive hybridization, <i>Anal Biochem.</i> , 183(2):231-244, 1989	
		KURATA, S. <i>et al.</i> , Fluorescent quenching-based quantitative detection of specific DNA/RNA using a BODIPY® FL-labeled probe or primer, <i>Nucl. Acids Res.</i> , 29:e34, 2001	
		BROUDE, N. E. <i>et al.</i> , DNA microarrays with stem-loop DNA probes: preparation and applications, <i>Nucl. Acids Res.</i> , 29:e92, 2001	
		ZAHAVY, E. and FOX, M. A., Photophysical quenching mediated by guanine groups in pyrenyl-n-alkylbutanoamide end-labeled oligonucleotides, <i>J. Phys. Chem. B.</i> , 103(43): 9321-9327, 1999	
		CROCKETT, A. O. and WITTWER, C. T., Fluorescein-labeled oligonucleotides for real-time PCR: using the inherent quenching of deoxyguanosine nucleotides, <i>Anal. Biochem.</i> , 290(1):89-97, 2001	
		WALTER, N. G. and BURKE, J. M., Real-time monitoring of hairpin ribozyme kinetics through base-specific quenching of fluorescein-labeled substrates, <i>RNA</i> , 3(4):392-404, 1997	

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